U.S. Department of Transportation
United States Coast Guard

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U. S. Coast Guard

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COMDTINST 3561.1B

JAN 6 1998

COMMANDANT INSTRUCTION 3561.1B

Subj: TRAINING DEVICE SIERRA 10H7 ADVANCED ELECTRONIC WARFARE ON-BOARD-TRAINER (EWOBT SYSTEM)

Ref: (a) Navy Training Plan Electronic Warfare Onboard Trainer, NTP S-00-8712C
(b) Electronic Warfare Training Product Catalog, NAVEDTRA 104
(c) Electronic Warfare On Board Training Systems Manual
(d) Security Manual, COMDTINST M5500.13A

1. PURPOSE. This Instruction promulgates and modifies procedures in reference (a) for the use, administration, and maintenance of the Navy's Electronic Warfare On-Board-Trainer (EWOBT) system by Coast Guard users in support of Electronic Warfare Mission Area (EWMA) training requirements.

2. ACTION. Area commanders, commanders of maintenance and logistics commands and unit commanding officers shall ensure compliance with the procedures contained in this Instruction for the maintenance and operation of the EWOBT system onboard Coast Guard Cutters.

3. DIRECTIVES AFFECTED. COMDTINST 3561.1A is cancelled.

4. DISCUSSION. The Navy is using the TD S10H7 computer-based instruction system to meet an onboard EWMA training requirement. The S10H7 is designed to be a standardized training medium to enhance the proficiency of EWMA personnel. The S10H7 employs computer-based instructional (CBI) media in a stand alone environment for use by CNO-designated commands, principally fleet operational units and shore-based commands that directly support EW operational training. A description of the S10H7, hereafter referred to as the **EWOBT system**, is contained in enclosure (1). A complete system description of the

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NON-STANDARD DISTRIBUTION:
B:c MLC's (6 extra), D:l ATG Atlantic, ATG Pacific, ATG MiddlePacific, ATG Mayport, FTG Little Creek, VA
D:m CGPACAREATRATEAM, EWOBT Repair Facility

courseware available for the EWOBT System is contained in enclosure (2). References (b) and (c) contain a complete listing of all EW training products available through the Navy.

5. RESPONSIBILITY. Responsibilities for implementation and administration of the EWOBT program within the Coast Guard follows:

   a. Commandant (G-OCU) will:

      (1) Serve as the program manager for the Coast Guard EWMA program.

      (2) Establish and prioritize Coast Guard EWOBT training requirements and goals for Navy approval and support.

      (3) Provide formal inputs to the onboard Clearinghouse Agent (CA), the Chief of Naval Education and Training (CNET), concerning Coast Guard near-term and long-range EWOBT goals and requirements.

      (4) Act as liaison in all matters concerning EWOBT hardware and courseware (less matters concerning the corrective maintenance of individual EWOBT systems) between Coast Guard EWOBT users and Navy Commands.

   b. Area Commanders will:

      (1) Review and forward to Commandant any recommendations for changes to EWOBT hardware or courseware received from units under their command.

      (2) Act as liaison between area units and the EWOBT Repair Facility.

   c. Commanding Officers will:

      (1) Ensure that the training requirements of this Instruction are met by unit EWMA personnel.

      (2) Appoint an EWOBT system manager to ensure the proper security, operation, and maintenance of the unit's EWOBT system.

      (3) Ensure all EWOBT system equipment is entered into the Electronic Equipment Information System (EEIS). EEIS equipment designations are in enclosure (3).

      (4) Ensure configuration change forms (OPNAV 4790CK) are submitted on all EWOBT system equipment onboard.

      (5) Ensure their systems have been entered into the EWOBT registry.

6. TECHNICAL DATA PLAN. EWOBT Operations Manuals and Systems Manager Manuals have been issued by the Navy to all EWOBT users. Information that is necessary to operate

the system, including the Computer Assisted Instruction (CAI) and Computer Managed Instruction (CMI), is addressed in these manuals.

7. TRAINING.

a. Initial Training. Initial operator, system manager, and maintenance training for the EWOBT is not required. The EWOBT Operations and System Manager Manuals, the EWOBT Shell Program (ESP), and courseware prompts contain all information necessary for system use and management.

b. EWMA Personnel Training Requirements. All EWMA personnel shall complete a minimum of four sequential EWOBT lessons per month. The Electronic Warfare Threat Recognition CD (module 5) shall also be included in the scheduled training. Personnel required to meet the monthly EWOBT training requirements are:

(1) Shipboard personnel that have Condition I or III watch station assignments as ESM operators or Electronic Warfare managers.

(2) Shipboard personnel that hold or are working toward final qualification for the following Enlisted Qualification Codes:

(a) H3 (AN/WLR-1) Electronic Support Measures Equipment (ESM Operator).

(b) H4 (AN/SLQ-32 ESM Operator).

(c) H5 (Electronic Warfare Manager).

8. MAINTENANCE. The EWOBT System has full life cycle support.

a. System Start Procedures. The EWOBT System is set at the factory to 'autoboot' (automatically load a disk operating system from the removable hard disk drive) when it is shipped. When powered up, the EWOBT System executes a series of internal tests to check that everything is working properly. These tests verify that all of the circuits are in a starting configuration as well as verifying that various functions of the computer will operate properly. You will normally hear a single audio tone. When the tests are finished, the computer will let you know that it is ready to run by displaying the opening system prompt (C:>). If some portion of the equipment fails to operate correctly, an error message will be displayed. Should this happen, contact the EWOBT ERF at 1-757-445-4472 (FTSCLANT). If circumstances preclude a telephone call, a message should be sent to the appropriate Area commander with all the pertinent information for coordination with the repair facility.

b. Preventive Maintenance. There are no preventive maintenance steps associated with the Central Processing Unit (CPU). The CPU is shipped from the factory as a sealed unit.

c. EWOBT System Operating Precautions. The following precautions will be observed by all EWOBT users to prevent damage to the system:

(1) Handle the removable hard disk drive with care and store it in its protective pouch when it is not installed in the EWOBT.

(2) Never remove the cartridge when the system is in the process of writing to the disk. Failure to follow this precaution can cause data loss and damage to the disk.

(3) Before you turn on the EWOBT System, be sure a bootable hard disk drive is installed and that all cardboard shipping inserts have been removed from all disk drives.

(4) CD-ROM Operating Precautions:

(a) Disks used with this unit must be placed in a special cartridge to protect them from scratches and dirt.

(b) Do not insert the cartridge until the system is powered up.

(c) Ensure that the cartridge's transparent cover is closed and locked.

(d) Insert the cartridge in the CD-ROM door with the transparent cover facing up. The cartridge will be automatically drawn into the unit.

(e) Do not expose the EWOBT System to smoke and/or dust intensive environments. Remove or totally encapsulate the EWOBT system whenever sandblasting, welding, chipping, grinding or other dust/smoke producing activities are taking place either in the EWOBT system compartment or near intake vents that serve the EWOBT system compartment. Dust and other airborne particles have the potential to destroy both the disk drives and the optical read lens of the CD-ROM reader.

d. Corrective Maintenance Support Procedures. **NO REPAIRS ARE AUTHORIZED LOCALLY**. Repairs may only be made at the EWOBT ERF. The warranty is void if the tamper seal is broken on the EWOBT system. Contact the ERF by telephone before returning any suspected faulty components for repair.

(1) Organizational Level Corrective Maintenance. Organizational level corrective maintenance by ship's force is limited to the isolation of defective components. This is accomplished by the EWOBT system performing a Power On System Test (POST) when powered up. Any system problems found will cause an error message to be displayed or produce a series of audio beeps.

(2) Technical Assistance. The telephone number listed in paragraph (8.a) above has been established at the EWOBT ERF to provide technical assistance to fleet

EWOBT users. A touch tone or rotary phone can be used to call the ERF. Assistance is available Monday-Friday during normal working hours. A telephone answering machine has been installed to receive calls after working hours, on weekends and holidays. Callers should provide their name, command, commercial telephone number, and a brief description of the problem. An ERF technician will return the call the next working day. If circumstances preclude a telephone call to the repair facility, a message should be sent to the appropriate Area commander with all the pertinent information for coordinating actions with the ERF.

(3) System Registration. Each EWOBT System hardware configuration has been placed into an EWOBT Master Data Base (by serial number) at the ERF. Commanding officers of EWOBT user units should ensure that their system has been entered into the EWOBT registry. Each serialized system must be entered into the EWOBT master data base before repair support can be initiated.

e. Equipment Turn-In Procedures. Faulty units (except the removable hard disk drive) or units needing upgrades may be sent to the ERF by U.S. Postal Service priority mail, using Return Receipt for Merchandise Service or United Parcel Service (UPS) using a UPS tracking service such as Ground Track. Include an OPNAV 4790.2K that reflects the specific malfunction and a DD-1149 (Requisition and Invoice/Shipping Document). In block four of the DD-1149, indicate "Transfer for no cost repair". **DO NOT** send the removable hard disk drive unless it is suspected faulty since it may contain classified information. If the removable hard disk drive is suspected faulty, it **MUST** be sent by U. S. Postal Service (USPS) registered mail (**NO UPS or FEDEX**) and be double wrapped with the security classification on the inside wrapper. Send units to the following address:

Commanding Officer
FTSCLANT
9727 Avionics Loop
Code 4224/Bldg V58
Norfolk, VA 23511

To permit timely tracking of all shipments, please provide the following information to the ERF for each shipment:

(1) Organization that originated shipment.

(2) Date and document number for each shipment.

(3) Serial number for each component.

f. Equipment Turn-in Security Procedures. The EWOBT System is authorized to process information up to and including Secret. Commands are reminded that once classified

material has been stored on the system hard disk, that hard disk is classified at the same level as the material that was stored on it. Hard disks should have Norton's WIPEDISK routine version 4.5 or higher, (or a similarly approved product) run on them to declassify the disk. If this is not done, shipment of the hard disk must be accomplished in accordance with procedures in reference (d). The ERF is cleared to handle Secret material. In the event of CPU or hard disk failure, all security procedures pertaining to the handling of classified material are to be followed.

9. SYSTEM ADMINISTRATION.

   a. EWOBT System Manager. All EWOBT User Commands shall appoint a collateral duty EWOBT system manager to fulfill the duties outlined in the EWOBT System Managers Manual.

   b. EWOBT Courseware Problems. Problems loading or operating EWOBT courseware (software) should be referred to the Naval Education Training Support Center, Pacific (NETSCPAC SAN DIEGO CA//N64//) at 619-524-4030. Problems relating to the technical accuracy or validity of the material content and/or recommendations for new/additional modules should be referred to Commandant (G-OCU-3) via the appropriate chain of command.

   c. EWOBT System Configuration Modifications. Commands are **not** authorized to modify their systems unless specifically authorized by the Principal Development Activity, Program Executive Officer for Ship Defense (PEO(SD)-D431).

10. FORMS AVAILABILITY. Form DD-1149, Requisition and Invoice/Shipping Document and OPNAV 4790/CK, Ship's Configuration Change form can be accessed from Workstation II (Forms Plus Laser) and Workstation III (Jetform Filler). OPNAV 4790.2K, Ship's Maintenance Action form, may be reproduced from the Maintenance, Material, Management System (3-M Manual), OPNAVINST 4790.4(series), the Configuration Management Plus (3M-Plus) program or copy obtained from your unit ordnance personnel.

ERNEST R. RIUTTA
Assistant Commandant for Operations

Encl: (1) EWOBT System Description
(2) EWOBT Courseware Description
(3) EWOBT EEIS Equipment Designations

EWOBT SYSTEM DESCRIPTION

1. SYSTEM USE. The EWOBT system is not to be used for Automated Data Processing (ADP) of any kind. It is to be used as a training device only.

2. SECURITY CONSIDERATIONS. A key advantage of the EWOBT system is that it contains a 2.1 Gb removable hard disk drive that provides the capability to process classified information up to and including Secret without classifying the entire system. For information of a higher classification, users are directed to consult with the District and/or Area Security Managers before importing them into the system. Once the 2.1 Gb hard disk drive is removed, the system becomes unclassified. The EWOBT system is not authorized for use unless it is physically located in a controlled space, with controlled access, and at least 118 feet (35 meters) within a perimeter fence.

**********WARNING**********

IF THE CPU SEAL IS BROKEN THE SECURITY OF THE SYSTEM IS VIOLATED.

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3. COMPONENT IDENTIFICATION. All of the main components of the EWOBT system contain equipment nomenclature tags identifying the Model No., serial No., and type of component.

**********WARNING**********

DO NOT OPEN THE CPU TO OBTAIN THE CD-ROM READER SERIAL NUMBER.

The serial number for the CD-ROM Reader is contained inside the sealed CPU. Opening the CPU will violate the security requirements for the EWOBT system. Obtain the CD-ROM reader serial number from the EWOBT transmittal documents. Serial number errors on the documents will be noted by the EWOBT ERF when CPU is received for repair and will notify the field unit registered to that CPU of the correction.

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4. EMBEDDED TRAINING DEVICE (ETD). The ETD consists of a circuit card for the EWOBT system and modified software for the AN/SLQ-32A(V). The ETD will provide full capacity stimulation to any AN/SLQ-32(V) that has been upgraded to "A" configuration with R-16 software. The ETD will replicate a dense electromagnetic environment for maximum onboard stimulation of both the AN/SLQ-32A(V) and AN/ULQ-16 both inport and underway.

5. The EWOBT System CPU contains a Warning Tag stating **"DO NOT INSERT OR REMOVE DISK DRIVE WITH POWER ON."** To do so will damage the system and require that it be returned to the repair facility for five hours of corrective maintenance.

6. EWOBT SYSTEM TECHNICAL SPECIFICATIONS.

COMPONENT	SPECIFICATIONS
AWK™ Training Engine	
CPU	Intel 80486DX2 - 50MHz
RAM	16 Mb (Maximum of 32 Mb)
Cache	256 direct mapped; write back ISA with 16
	Bit expansion slots and two 32 Bit VESA
	Local Bus (VLB) slots to support the video
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	Local Bus (VLB) slots to support the video
	graphics accelerator and removable hard disk
	drive controller
Case	Mini Tower with 300 Watt Power Supply
AWK™ Removable Hard Disk Drive	2.1 Gb formatted; Average seek time <12
	Milliseconds MTBF 45K hours
NFG3FGx ™ Monitor	1024 x 768 Resolution Super VGA (SVGA)
NEC CDR-84 CD-ROM Reader	680 Mb capacity, <300 Millisecond seek time
	300 Kb per second data transfer rate
TEAC™ Floppy Drive	3 ½ 1.44 Mb, High density
AWK™ Keyboard	121 - Key Enhanced
AWKMOUSE™	Serial Trackball with 4 Buttons
Physical Dimensions	
Training Engine	7.2(W)x13(H)x16(D) Inches, 20 lbs Minitwr
Monitor NEC 3FGX	14.7(W)x25.6(H)x16.3(D) Inches, 38.1 lbs
Key Board	20.5(L)x7.9(W)x1.34(H) Inches

EWOBT COURSEWARE

1. EWOBT courseware is provided on CD-ROM disks. References (b) and (c) contain a complete listing of EWOBT courseware. Distribution has been completed for the following courseware:

   a. Maintenance Modules. The Navy Electricity and Electronics Training Series (NEETS) modules progress from elementary concepts to advance concepts and advanced test equipment. NEETS provides instruction for beginners in the basics of electricity and electronics and a refresher for experienced personnel. Modules 19 and 20 are incorporated throughout each of the NEETS modules and will not be developed as separate modules. Content of specific modules are:

Module No.	Title/content
1.	Introduction to Matter, Energy, and Direct Current
2.	Introduction to Alternating Current
3.	Introduction to Circuit Protection, Control., and Measurement
4.	Introduction to Electrical Conductors, Wiring and Schematics
5.	Introduction to Generators and Motors
6.	Introduction to Electronic Emission, Tubes and Power Supplies
7.	Introduction to Solid-State Devices and Power Supplies
8.	Introduction to Amplifiers
9.	Introduction to Wave Generation and Wave Shaping circuits
10.	Introduction to Wave Propagation, Transmission Lines/Antennas
11.	Microwave Principles
12.	Modulation Principles
13.	Introduction to Number Systems and Logic Circuits
14.	Introduction to Microelectronics
15.	Principles of Synchros, Servos, and Gyros
16.	Introduction to Test Equipment
18.	Radar Principles
21.	Test Methods and Practices
24.	Introduction to Fiber Optics

b. Southwest Asia Theater Operations Briefing. Provides intelligence on weapon systems and emitters that may be encountered while in the Persian Gulf region. This brief provides detailed data that has been collected from intelligence sources and identifies the country in possession of and capable of utilizing these systems. (One CD-ROM disk).

c. AN/ULQ-16(V) Pulse Analyzer. Ten diskettes on the operation and maintenance of the AN/ULQ-16(V) Pulse Analyzer.

d. Operational Modules. Provides general knowledge training in electronic warfare fundamentals. Content of specific modules are:

Module No.	Title/content
1.	Functional Recognition Techniques
2.	Battle Group EW Assets
3.	Battle Group Integration Philosophy
4.	Emission Control (EMCON)/Operations Security
5.	EW Threat Recognition
6.	Operational Deception
7.	EW Operational Preplanning
8.	Basic Radar Fundamentals
9.	Electronic Protection (EP)
10.	EW Reporting Procedures

EWOBT EEIS EQUIPMENT DESIGNATIONS

1. Components of the EWOBT System will be accountable under the Coast Guard Electronic Equipment Identification System (EEIS). This action is necessary to properly allocate for maintenance funding.

2. The following EEIS equipment designations have been assigned by Commandant (G-SCE):

EWOBT System Component	EEIS Equipment Designation
SIERRA 10H7	EWOBT System
MK48633TTM	EWOBT CPU
CDR-84	EWOBT CD-ROM Reader
NEC 3FGX	EWOBT Monitor
MDRV6 Series	EWOBT Headphones
RMC265B	EWOBT EMI Filter
AWKRHDD	EWOBT Removable HDD
AWKS10H7	EWOBT Trackball
PROXV1	EWOBT Keyboard